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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/826,174

04/16/2004

Scott C. Hornbostel

PM98.061/3

9881

7590

10/16/2006

J Paul Plummer
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EXAMINER

HUGHES, SCOTT A

ART UNIT

PAPER NUMBER

3663

DATE MAILED: 10/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/826,174	HORNBOSTEL ET AL.	
	Examiner	Art Unit	
	Scott A. Hughes	3663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-40 is/are rejected.
- 7) ☒ Claim(s) 21-40 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 4/16/2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/16/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Reissue Applications

The reissue oath/declaration filed with this application is defective because it fails to identify at least one error which is relied upon to support the reissue application. See 37 CFR 1.175(a)(1) and MPEP § 1414.

Claims 1-40 are rejected as being based upon a defective reissue oath/declaration under 35 U.S.C. 251 as set forth above. See 37 CFR 1.175.

The nature of the defect(s) in the oath/declaration is set forth in the discussion above in this Office action.

Claim Objections

Claims 21-40 are objected to because of the following informalities:

The claims do not contain the proper markings to show amendments to the claims in the Reissue application in accordance with 37 CFR 1.173 (especially 1.173 (d)). All of the newly added claims must be underlined to show that they are matter to be added by Reissue.

Claims 21-40 are objected to for failing to comply with 37 CFR 1.173 (c) which states that whenever there is an amendment to the claims pursuant to paragraph (b) of 37 CFR 1.173, there must also be supplied, on pages separate from the pages containing the changes, the status (i.e., pending or canceled), as of the date of the amendment, of all patent claims and of all added claims, and an explanation of the support in the disclosure of the patent for the changes made to the claims.

The applicant did not provide an explanation of the support in the disclosure of the patent for the changes made to the claims. It is noted that in remarks filed 4/16/2004 by Attorney J. Paul Plummer that it is stated that "A new phrase used in claims 21 and 35 is supported in the original patent at column 1, Lines 43-44." This statement fails to say exactly what limitations in the added claims are supported by this portion of the specification. It also fails to address support in the disclosure of the patent for the other newly added dependent and independent claims.

Appropriate correction is required.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 11-20 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claims are directed to electrical signals, and therefore the claimed invention does not fall within at least one of the four categories of patent eligible subject matter recited in 35 U.S.C. 101 (process, machine, manufacture, or composition of matter). The signal itself is made up by the process described in the claims for its creation. The applicant is not claiming the process of creating the signal, but is rather claiming the signal itself, which does not fall into one of the categories of eligible subject matter.

Claims 1-10 and 21-40 are rejected under 35 U.S.C. 101 because the invention as claimed does not produce a useful, concrete and tangible result.

The last step of claim 1 states "correlating said recorded seismic signals with said reference waveform." This last step is not a tangible result since the correlation is an abstract idea that could be performed by a person in their head. The final step does not produce a real world result or result in a physical transformation.

The last step of claim 8 states "summing said pair of correlations of said recorded seismic signals and their corresponding source waveform." This last step is not a tangible result since the correlation is an abstract idea that could be performed by a person in their head. The final step does not produce a real world result or result in a physical transformation.

The last step of claim 21 states "in order to correlate said seismic signals." This last step is not a tangible result since the correlation is an abstract idea that could be performed by a person in their head. The final step does not produce a real world result or result in a physical transformation.

The last step of claim 28 states "correlating said recorded seismic signals with said reference waveform." This last step is not a tangible result since the correlation is an abstract idea that could be performed by a person in their head. The final step does not produce a real world result or result in a physical transformation.

The last step of claim 35 states "in order to correlate said seismic signals." This last step is not a tangible result since the correlation is an abstract idea that could be

Art Unit: 3663

performed by a person in their head. The final step does not produce a real world result or result in a physical transformation.

The last step of claim 38 states "summing the two correlated records." This last step is not a tangible result since the correlation is an abstract idea that could be performed by a person in their head. The final step does not produce a real world result or result in a physical transformation.

The dependent claims do not provide steps which produce a tangible result in the methods of the independent claims.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 21-27 and 35-37 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The "in order to correlate" clause of claims 21 and 35 provides language that suggests or makes optional but does not require steps to be performed or does not limit the scope of a claim or claim limitation (MPEP § 2106(II,C)). Accordingly, the metes and bound of the claim can not be ascertained by one having ordinary skill in the art.

Claim 21 recites the limitation "said source waveform and a corresponding reference waveform having been selected" in step (a). There is insufficient antecedent basis for the limitation of "a corresponding reference waveform having been selected" in the claim. This term implies that a reference waveform is already present, but it is the first time that the term is mentioned in the claim. It appears as though the claim should read, "and a corresponding reference waveform being selected to reduce" in order to avoid the antecedent basis problem.

Conclusion

The cited prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott A. Hughes whose telephone number is 571-272-6983. The examiner can normally be reached on M-F 9:00am to 5:30pm.

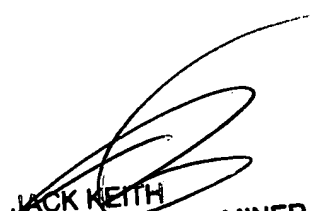
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Keith can be reached on (571) 272-6878. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3663

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



SAH



JACK KEITH
SUPERVISORY PATENT EXAMINER